

What is claimed is:

1. A device for treating cardiac disease of a heart having a longitudinal axis from an apex to a base and having an upper portion and a lower portion divided by an A-V groove, said heart including a valvular annulus adjacent said A-V groove and ventricular lower extremities adjacent said apex, the device comprising:

- a jacket of flexible material of knit construction defining a volume between an open upper end and a lower end, said jacket dimensioned for said apex of said heart to be inserted into said volume through said open upper end and for said jacket to be slipped over said heart, said jacket further dimensioned for said jacket to have a longitudinal dimension between said upper and lower ends sufficient for said jacket to constrain said lower portion with said jacket constraining said valvular annulus and further constraining said ventricular lower extremities;
- said jacket adapted to be secured to said heart with said jacket having portions disposed on opposite sides of the heart between said valvular annulus and said ventricular lower extremities; and
- said jacket adapted to be adjusted on said heart to snugly conform to an external geometry of said heart and assume a maximum adjusted volume for said jacket to constrain circumferential expansion of said heart beyond said maximum adjusted volume during diastole and permit substantially unimpeded contraction of said heart during systole.

2. A device according to claim 2 wherein:

- said material is expandable along a first material axis in response to a force parallel to said first axis greater than an expansion of said material

along a second axis in response to a force of equal magnitude parallel to said second axis;

- said material oriented for said first axis to extend circumferentially around said longitudinal dimension.

3. A device according to claim 1 wherein said jacket is open at said lower end.

4. A device according to claim 1 wherein said jacket is closed at said lower end.

5. A device according to claim 1 wherein said material is run resistant.

6. A device according to claim 5 wherein:

- said material is expandable along a first material axis in response to a force parallel to said first axis greater than an expansion of said material along a perpendicular second axis in response to a force of equal magnitude parallel to said second axis;

- - said material oriented for said first axis to extend from said upper end of said jacket toward said lower end.

7. A device according to claim 1 wherein said material is sufficiently flexible to gather excess amounts of said material following placement of said jacket over said heart to snugly conform said material to an external geometry of said heart.

8. A device according to claim 5 wherein said material is sufficiently flexible to gather excess amounts of said material following placement of said jacket over said heart to snugly conform said material to an external geometry of said heart.

9. A device according to claim 1 wherein said material is selected from a group of polytetrafluoroethylene, expanded polytetrafluoroethylene, polypropylene, polyester or stainless steel.
10. A device according to claim 5 wherein said material is formed of elongated fibers selected from a group of polytetrafluoroethylene, expanded polytetrafluoroethylene, polypropylene, polyester or stainless steel.
11. A device according to claim 1 wherein said jacket is sized to at least partially cover and constrain said upper portion.
12. A device according to claim 1 further comprising a liner sized and positioned to be disposed between said heart and said jacket, said liner formed of an anti-fibrotic material.
13. A device according to claim 1 wherein the jacket is electrically permeable.
14. A device for treating cardiac disease of a heart having a longitudinal axis from an apex to a base and having an upper portion and a lower portion divided by an A-V groove, said heart including a valvular annulus adjacent said A-V groove and ventricular lower extremities adjacent said apex, the device comprising:
  - a jacket of flexible, electrically permeable material adapted to be secured to said heart with said jacket having portions disposed on opposite sides of the heart between said valvular annulus and said ventricular lower extremities; and
  - said jacket adapted to be adjusted on said heart to snugly conform to an external geometry of said heart and assume a maximum adjusted volume for said jacket to constrain circumferential expansion of said heart beyond

said maximum adjusted volume during diastole and permit unimpeded contraction of said heart during systole.

15. A device according to claim 2 wherein said jacket circumferentially surrounds said heart.
16. A method for treating cardiac disease of a patient's heart, said method comprising:
  - surgically accessing said patient's heart and diaphragm;
  - placing a jacket around said heart, said jacket comprising a biomedical material having an upper end and a lower end;
  - adjusting said jacket on said heart to snugly conform to an external geometry of said heart and assume a maximum adjusted volume for said jacket to constrain circumferential expansion of said heart beyond said maximum adjusted volume during diastole and permitting unimpeded contraction of said heart during systole; and
  - securing said lower end of said jacket to said diaphragm.
17. A method according to claim 16 wherein said lower end of said jacket is secured to said diaphragm using sutures.